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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,314	01/25/2002	Agust S. Egilsson	2345.2042-000	1907

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EXAMINER

MOFIZ, APU M

ART UNIT	PAPER NUMBER
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2175

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/057,314

Applicant(s)

EGILSSON ET AL.

Examiner

Apu M Mofiz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-12 is/are rejected.
- 7) ☐ Claim(s) 6-7 and 13-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5 and 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by DeKimpe et al. (U.S. Patent No. 6,542,895 and DeKimpe hereinafter).

As to claims 1 and 8, DeKimpe teaches a system for editing (i.e. adding or removing dimensions and dimension members/levels) (col 12, lines 5-10) a data cube (col 13, lines 10-25) with respect to a normal criterion (i.e. the query criterion, e.g., "sum of sales and costs data" ... "sales for red bats in the north region in a particular time period") (col 13, lines 1-25), the criterion initially satisfied by some but not all dimension level combinations (i.e. Fig. 3 indicates that if the Time dimension did not include Q4 initially, the query to get sum of sales for red bat in the year 1997 would not include the Q4 dimension level. If the Q4 dimension member/level is added to the Time dimension, the query criterion will be satisfied by one additional dimension level i.e., Q4.) (Fig.3; col 12, lines 5-12; col 13, lines 1-25) in said data cube (col 13, lines 10-25), the system comprising: a dimension structure of the data cube (Fig.3; col 13, lines 10-25), the dimension structure including dimension levels (i.e. dimension members) (Fig. 3) of the

data cube (col 13, lines 10-25); and means for editing (col 12, lines 5-10) the dimension structure (col 12, lines 5-10) of said data cube (Fig.3; col 13, lines 10-25) so that said normal criterion is satisfied by at least one additional dimension level combination (i.e. Fig. 3 indicates that if the Time dimension did not include Q4 initially, the query to get sum of sales for red bat in the year 1997 would not include the Q4 dimension level. If the Q4 dimension member/level is added to the Time dimension, the query criterion will be satisfied by one additional dimension level i.e., Q4.) (Fig.3; col 12, lines 5-12; col 13, lines 1-25).

As to claims 2 and 9, DeKimpe teaches wherein the means for editing forms a modified (i.e., when a dimension is deleted from a multi-dimensional database (e.g., a cube), the multi-dimensional database has one less dimension (e.g., the cube becomes a square). By the same principle, if one dimension is added, a square will become a cube and a cube will become a hypercube.) (col 13, lines 1-25) data cube (Fig.3; col 13, lines 10-25) in which said criterion is satisfied by all the dimension level combinations (i.e. Fig. 3 indicates that if the Time dimension did not include Q4 initially, the query to get sum of sales for red bat in the year 1997 would not include the Q4 dimension level. If the Q4 dimension member/level is added to the Time dimension, the query criterion will be satisfied by all dimension members/levels including one additional dimension level i.e., Q4.) (Fig.3; col 12, lines 5-12; col 13, lines 1-25) of the modified data cube (col 13, lines 1-25).

As to claims 3 and 10, DeKimpe teaches a projection (i.e., "This often includes the consolidation of projected and actual data according to more than one consolidation

path or dimension.”) (col 2, lines 5-10) of said data cube (Fig.3; col 13, lines 10-25); and wherein the means for editing (i.e. adding or removing dimensions and dimension members/levels) (col 12, lines 5-10) edits a dimension structure (col 12, lines 5-10) of the projection (col 2, lines 5-10) of said data cube (Fig.3; col 13, lines 10-25) and forms a modified projection in which said criterion is satisfied by all dimension level combinations (i.e. Fig. 3 indicates that if the Time dimension did not include Q4 initially, the query to get sum of sales for red bat in the year 1997 would not include the Q4 dimension level. If the Q4 dimension member/level is added to the Time dimension, the query criterion will be satisfied by all dimension members/levels including one additional dimension level i.e., Q4.) (Fig.3; col 12, lines 5-12; col 13, lines 1-25) from said modified projection (col 2, lines 5-10).

As to claims 4 and 11, DeKimpe teaches wherein the means for editing includes editing (i.e. adding or removing dimensions and dimension members/levels) (col 12, lines 5-10) dimension structures (Fig. 3; col 12, lines 5-10) so that one or more normal criterion (i.e. the query criterion, e.g., “sum of sales and costs data” ... “sales for red bats in the north region in a particular time period”) (col 13, lines 1-25) associated with one or more projections (i.e., “This often includes the consolidation of projected and actual data according to more than one consolidation path or dimension.”) (col 2, lines 5-10) of said data cube (Fig.3; col 13, lines 10-25) are satisfied by all dimension level combinations (i.e. Fig. 3 indicates that if the Time dimension did not include Q4 initially, the query to get sum of sales for red bat in the year 1997 would not include the Q4 dimension level. If the Q4 dimension member/level is added to the Time dimension, the

query criterion will be satisfied by all dimension members/levels including one additional dimension level i.e., Q4.) (Fig.3; col 12, lines 5-12; col 13, lines 1-25) from said projections (col 2, lines 5-10), thereby allowing complex criteria, including inference (i.e. "calculations and modeling applied across dimensions, through hierarchies and/or across members; trend analysis over sequential time periods") (col 2, lines 25-35) control criteria required to enforce identify protection requirements (i.e., DeKimpe's multi-dimensional analysis can be applied to any OLAP functionality including identity protection system, which is an online analytical program) (col 2, lines 24-60) for subjects of research studies (col 2, lines 25-35), to be satisfied by the data cube (Fig.3; col 13, lines 10-25).

As to claims 5 and 12, DeKimpe teaches wherein the data cube (Fig.3; col 13, lines 10-25) is realized as a star schema (col 4, lines 45-50) in an SQL (col 4, lines 12-21) relational database (col 4, lines 12-21).

### ***Allowable Subject Matter***

3. Claims 6-7 and 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As to claims 6 and 13, DeKimpe does not disclose, teach or suggest the claimed limitations of (in combination with all other features in the claims), associating with the

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dimension structure of said data cube, an intensity function revealing intensity of patterns or structures in the data cube wherein the editing utilizes the function in editing of the dimension structure, including enabling the editing process to avoid invalidating useful patterns and structures expressed by the data cube.

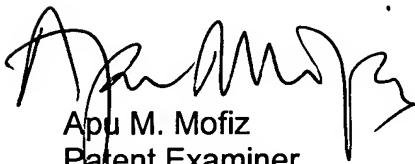
The closest prior arts fail to anticipate or render Applicant's limitations above obvious.

***Points of Contact***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Apu M. Mofiz whose telephone number is (703) 605-4240. The examiner can normally be reached on Monday – Thursday 8:00 A.M. to 4:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached at (703) 305-3830. The fax numbers for the group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.



Apu M. Mofiz  
Patent Examiner  
Technology Center 2100

July 14, 2004